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(54) **Instant bingo game card**

Sofort zu kontrollierende Bingospielkarte

Carte de jeu de bingo à contrôle direct

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Description

The invention relates to the field of instant lottery tickets and in particular to instant bingo game cards.

The purpose of an instant bingo card or ticket is to simulate the play of a conventional bingo game utilizing instant lottery technology. An instant bingo card will normally include a caller card portion which has a number of combinations of letters and numbers covered by a latex or scratch-off coating. The letter-number combinations on the caller's card correspond to the letter-number combinations found on the balls that are typically drawn in a conventional bingo game. There are normally twenty five letter-number combination printed under the scratch-off coating. Also printed on an instant bingo card is a group of usually four to six player cards which are similar in format to bingo cards used by players in conventional bingo games. To play the game, a player will scratch off the coating over the letter-number combinations on the caller's card and mark on each of the player cards any numbers that may correspond to letter-number combinations on the caller's card. Usually printed on the instant bingo card adjacent to the player cards is an indication of the combinations that will result in the awarding of a prize. After marking the player cards, the player is able to determine if one or more of the player cards represent a winning combination and if a winning combination is present, the player can then present the card to a lottery agent to redeem the indicated prize(s).

One of the challenges of producing a commercially satisfactory instant lottery card is to provide a method for marking the player cards which is convenient to use yet economical to manufacture. In one approach the numbers on the player cards are covered by a scratch-off coating and numbers corresponding directly to the numbers printed on the player card are printed, utilizing for example a technique disclosed in U.S. Patent 5,074,566, on the scratch-off coating. The player is then able to mark his cards by scratching off the numbers on his player card corresponding to the letter-number combinations on the caller card portion of the instant bingo card. This approach has two disadvantages in that it requires a second scratch-off area and more importantly requires two separate printings of the numbers on the player cards. These factors substantially increase the manufacturing cost of the card. The second scratch-off area also results in a great deal more scratch-off debris following the play of the game.

A second technique, as disclosed in U.S. Patent 5,193,815, is to print a translucent coat of a scratchable material over the player cards which is pigmented so as to modify the appearance of the colour of the area under the translucent coat. By scratching off the translucent coat over a particular number on the player cards, the player can mark this number by the resulting apparent colour change. This approach has three disadvantages. First, when effecting the colour change the player's card

area always changes from a darker colour to a lighter colour. This is the opposite of how a player marks his card in an actual bingo game. Second, the colour(s) of the player's cards before rubbing (marking) are always created colours. The created colour(s) are the combination of the colour of the underlying layer on which the player's numbers are printed and the colour of the translucent tinted layer. Colours created in this fashion are limited by the tint of the scratch-off translucent layer. The colour of the translucent layer is limited in that it must be of sufficient contrast to result in easily discernible marks of the player's card when removed but not so dark as to make reading of the player's number difficult prior to removal. Finally, the scratch-off layer over the player's cards results in more scratch-off debris following play of the game.

It is therefore an object of the invention to provide an instant bingo card having player cards with a method of marking numbers on the player cards that result in high contrast with minimum production costs and less scratch off debris following play of the game.

Another object of the invention is to provide an instant bingo card having player cards where numbers of the player cards can be marked by simply applying pressure to the numbers to be marked. To accomplish this objective, a colour former and an activator are applied to the player card area. By microencapsulating either the colour former or the activator, colour change is inhibited until pressure is applied by the player to the number to be marked. In one embodiment of the invention, the colour former is applied over the numbers printed on the card substrate and the activator or colour developer is laid down in microencapsulated form over the colour former.

The invention is set out in claim 1. Advantageous embodiments of the invention are featured in the dependent claims 2 to 4.

Following is a description, by way of example only and with reference to the accompanying drawings, of one method of carrying the invention into effect.

In the drawings:-

Figure 1 is a plan view of one embodiment of an instant bingo game card in accordance with the present invention, and

Figure 2 is a cross section on the line 2-2 of Figure 1.

Referring now to the drawings, there is shown an instant bingo game card 36 having a caller's card portion 38 and a set of four players cards 40-46. The caller's card portion 38 has a group of letter-number combinations or indicia indicated at 48 printed below a scratch-off latex covering indicated at 50 and the players cards 40-46 contain a column of five numbers aligned below each of the letters BINGO. Marking of the numbers in the players cards 40-46 is provided for by

applying a colour former 52 and an activator 54 over a number image 56 printed on a primer surface 58 that is applied to a card substrate 60. A seal coat 62 is applied over the activator 54. The numbers on the players cards 40-46 are marked by pressing on the particular number to be marked which has the effect of combining the colour former 52 with the activator or developer 54 to produce a visible colour change on the number. A dye or equivalent substance is included in the colour former 52 that is sufficiently different in colour from the colour of the background on the substrate 60 to result in a readily perceivable mark. For example, the player would mark the letter-number combination 123 which appears at 64 on the caller's card 38 by pressing on a corresponding number 68-72 on one of the players cards 40-46. The shaded portion of the player's cards 42-46 covering the numbers 68-72 is used to represent in Figure 1 the visual effect of the dye.

To prevent premature mixing, either the activator 54 or the colour former 52 are microencapsulated.

In the preferred embodiment, the colour former 52 has the following composition by weight: an aqueous dispersion of a microencapsulated blue leuco dye where the microspheres are 4-10 microns, 46.5%; an acrylic copolymer, 8%; water, 12.9%; isopropyl alcohol, 15%; a non-ionic surfactant, 1%; modified dimethyl polysiloxane, 0.5%; large granule wheat starch having a particle size of 16-32 microns, 7.5%; water, 5%; ammonium hydroxide, 0.3% and water, 3.3%.

The preferred activator 54 formulation has the following composition by weight: normal propyl acetate, 27.44%, ethyl alcohol, 7.3%; phenolic resin, 24.46%; acrylic resin, 15%; ss nitrocellulose (30% dry), 8.5%, ethyl alcohol, 5% and ethyl acetate, 12.5%.

The above formulations including a water based colour former lacquer 52 and solvent based activator 54 represent the preferred compositions. However, it will be understood that the activator 54 could also be a water based system and the colour former 52 could be solvent based. Also the activator 54 can be microencapsulated. As can be appreciated, the object of microencapsulating one or the other is to separate the colour former 52 from the activator 54 until pressure is applied by a player to the number on one of the player cards 44-46 that he or she desires to mark.

Another important feature of the invention is that the colour former 52 and the actuator 54, as described above, can form a clear layer over the number or image 56 on the player's cards 40-46. In this manner, maximum contrast can be provided for between the marked and unmarked numbers on the player's cards 40-46. Also, it is possible to print a developable symbol such as an "x" in register over each of the numbers on the player's cards 40-46 using the actuator 54 and colour former 52. Rubbing the number would then produce the symbol as a mark for the number.

Claims

1. An instant bingo game card comprising a substrate (36) having a caller's card area (38) and a player's card area (40,42,44,46), a plurality of indicia (68,70,72) being at all times visible and carried on the player's card area (40,42,44,46) and indicating means (52,54) adapted to be selectively operable to select indicia (68,70,72), which indicating means (52,54) function to provide a change from a darker to a lighter colour characterised in that the indicating means (52,54) includes a pressure sensitive dye (52) and a developer (54) at least one of which is microencapsulated.
2. A card as claimed in Claim 1 characterised in that the indicating means (52,54) comprise a visual component (52,54) and a covering component (62) which covers the visual component (52,54).
3. A card as claimed in Claim 1 or Claim 2 characterised in that the dye (52) includes a colour former (52) in contact with an activator (54).
4. A card as claimed in Claim 3 characterised in that the colour former (52) is water based and the activator (54) is solvent based.

Patentansprüche

1. Sofort zu kontrollierende Bingo-Spielkarte, bestehend aus einem Trägermaterial (36), das folgendes aufweist: eine Teilnehmerkartenfläche (38) und eine Spielkartenfläche (40,42,44,46), eine Anzahl von Anzeigen (68,70,72), die sich auf der Spielkartenfläche (40,42,44,46) befinden und ständig sichtbar sind, sowie Anzeigemittel (52,54), die selektiv betriebsbereit sind, um Anzeigen (68,70,72) auszuwählen, wobei die Anzeigemittel (52,54) so funktionieren, daß sie einen Wechsel von einer dunkleren zu einer helleren Farbe bewirken, **dadurch gekennzeichnet**, daß die Anzeigemittel (52,54) eine druckempfindliche Farbmasse (52) und einen Entwickler (54) aufweisen, wobei mindestens eines davon mikroverkapselt ist.
2. Spielkarte nach Anspruch 1, **dadurch gekennzeichnet**, daß die Anzeigemittel (52,54) aus einem optischen Komponenten (52,54) und einer Aodeckkomponente (62), welche die optische Komponenten (52,54) abdeckt, bestehen.
3. Spielkarte nach Anspruch 1, **dadurch gekennzeichnet**, daß zur Farbe (52) ein Farbbildner (52) in Kontakt mit

einem Aktivierungsmittel (54) gehören.

4. Spielkarte nach Anspruch 3,
dadurch gekennzeichnet, daß
 der Farbbildner (52) auf Wasser und das Aktivie- 5
 rungsmittel (54) auf einem Lösungsmittel basieren.

Revendications

1. Carte de jeu instantané de bingo comportant un 10
 substrat (36) ayant une zone de carte d'appelant
 (38) et une zone de carte de joueur (40, 42, 44, 46),
 plusieurs marques (68, 70, 72) étant visibles à tout
 moment et étant supportées sur la zone de carte de
 joueur (40, 42, 44, 46) et des moyens d'indication 15
 (52, 54) adaptés pour pouvoir être actionnés de
 manière sélective pour sélectionner des marques
 (68, 70, 72), lesquels moyens d'indication (52, 54)
 agissent pour fournir un changement de couleur à
 partir d'une couleur plus sombre vers une couleur 20
 plus claire, caractérisée en ce que les moyens
 d'indication (52, 54) comportent un colorant sensi-
 ble à la pression (52) et un développeur (54), dont
 au moins un est microencapsulé. 25
2. Carte selon la revendication 1, caractérisée en se
 que les moyens d'indication (52, 54) comportent un
 composant visuel (52, 54) et un composant de
 recouvrement (62) qui recouvre le composant
 visuel (52, 54). 30
3. Carte selon la revendication 1 ou 2, caractérisée en
 ce que le colorant (52) comporte un agent de for-
 mation de couleur (52) en contact avec un activa-
 teur (54). 35
4. Carte selon la revendication 3, caractérisée en ce
 que l'agent de formation de couleur (52) est à base
 d'eau et l'activateur (54) est à base de solvant. 40

45

50

55

Fig. 1

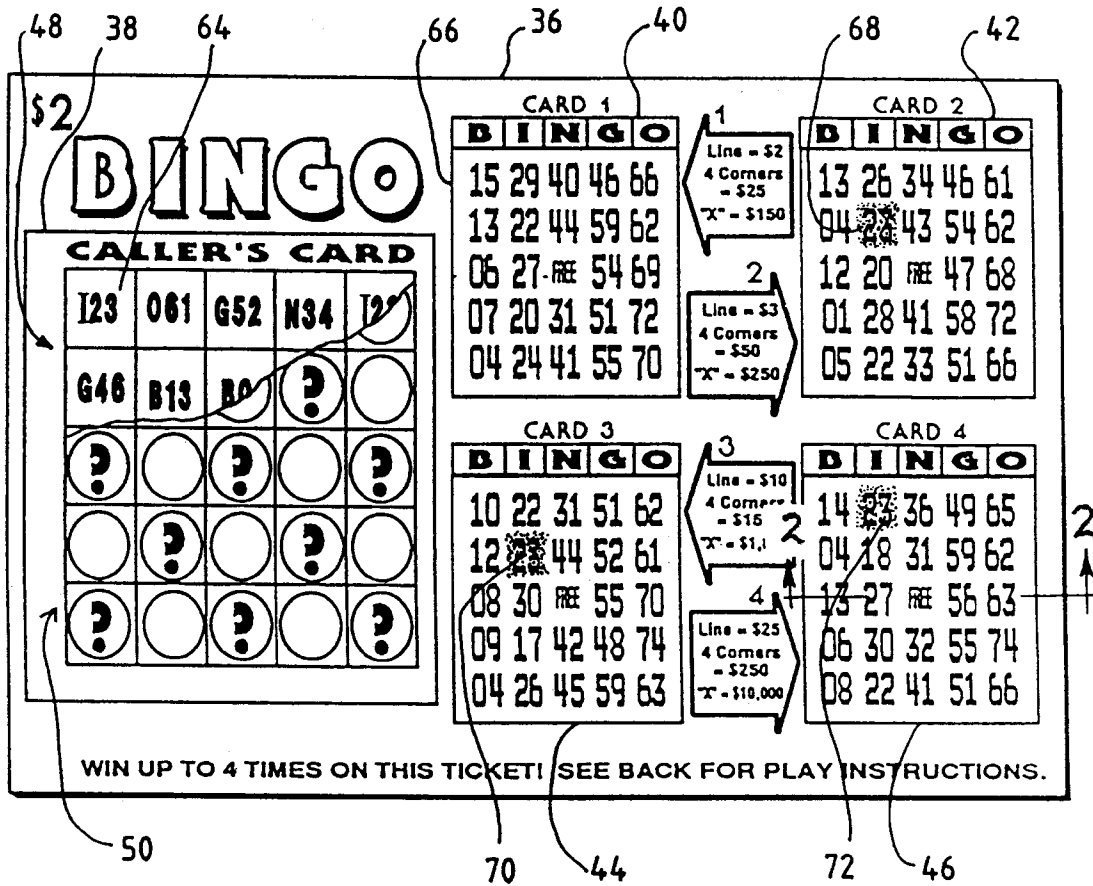


Fig. 2

